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ITEM 7:* PROGRAMME MATTERS, INCLUDING THE IMPLEMENTATION OF THE PLAN OF ACTION TO COMBAT DESERTIFICATION

PROGRAMME MATTERS CALLING FOR POLICY GUIDANCE FROM THE COUNCIL

Report of the Executive Director

Addendum

EARTHWATCH

ENVIRONMENTAL INDICATORS

Summary

The present report contains:

A brief description of the activities undertaken by UNEP with regard to the strengthening the capacity of Earthwatch, and of the reasons behind UNEP's inability to complete the detailed proposals for financial and institutional support which were requested by the Governing Council in its decision 16/37;

A review of the issues to be addressed in the work on environmental indicators and of the roles that UNEP could play in that field.

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* Refers to the number of the item on the Provisional Agenda (UNEP/GC.17/1).

I. EARTHWATCH

1. Earthwatch was the name given by the 1972 United Nations Conference on the Human Environment to the assessment part of its action plan, and thus to all the environmental assessment activities of the United Nations system. Since its inception, UNEP has worked to implement Earthwatch in cooperation with the specialized agencies of the United Nations system, which have made major contributions to environmental assessments in their areas of responsibility.

2. The General Assembly, in its resolution 44/224 of 22 December 1989 on International cooperation in the monitoring, assessment and anticipation of environmental threats and in assistance in cases of environmental emergency, recognized the need to strengthen Earthwatch and called for broader participation in it as a continuing mechanism "to make authoritative assessments, to anticipate environmental degradation and to issue early warnings to the international community." The 1991 report of the Secretary-General on follow-up of General Assembly resolution 44/224 was reviewed at the sixteenth session of the Governing Council (see UNEP/GC.16/17). The Council adopted decision 16/37 on early warning and forecasting of environmental emergencies, reinforcing the concept of Earthwatch, and requested the Executive Director "to prepare detailed proposals for ensuring adequate financial and institutional support to enable Earthwatch to carry out fully its mandated programmes, and to report on these matters to the Governing Council at its seventeenth regular session, on the basis of the decisions taken by the General Assembly on the Secretary-General's report".

3. As a follow up to Governing Council decision 16/37, UNEP initiated discussions with the United Nations agencies, at the Designated Officials for Environmental Matters (DOEM) level, on the strengthening of Earthwatch. Agencies supported the creation of an inter-agency consultative mechanism to provide overall coordination for Earthwatch, but requested the postponement of any decision on such a mechanism owing first, to the uncertainties over the outcome of the United Nations Conference on Environment and Development (UNCED) and, second, to the restructuring taking place in the United Nations system. The institutional framework for Earthwatch can only be determined once the rationalization of inter-agency bodies and the establishment of the new structures for sustainable development are more advanced. Therefore, it has not been possible for UNEP to complete the detailed proposals for adequate financial and institutional support for Earthwatch requested by the Governing Council in its decision 16/37.

4. The General Assembly, in resolution 46/217 of 20 December 1991 on international cooperation in the monitoring, assessment and anticipation of environmental threats and in assistance in cases of environmental emergency, noted Governing Council decision 16/37, considered the relevant parts of the report of the Governing Council at its sixteenth session, took note of the report of the Secretary-General on the monitoring, assessment and anticipation of environmental threats and the rendering of assistance in cases of environmental emergency, and invited the Secretary-General to convey it to the Preparatory Committee of UNCED. UNCED, in turn, adopted Agenda 21 which in several places calls for the strengthening of Earthwatch, and includes it among the priority areas on which UNEP should concentrate (see Agenda 21, Chapter 38, paragraph 22 (d)).

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5. The overall aim of Earthwatch is to make the provision of reliable information for decision-making on the global environment a more coherent and effective process, as called for in Agenda 21. This process will require the integration of the many kinds of information needed to achieve sustainable development using a comprehensive assessment process, relating scientific understanding and data on the environment to issues such as poverty, types of development, resource consumption and quality of life. It is also necessary to integrate better the flow of information through focused data collection, data quality control, production of comprehensive assessments, and delivery to the users (decision makers, managers, general public), and to ensure that user needs influence the design of cost-effective monitoring and assessment programmes. The result should be more efficient monitoring, assessment and decision-making at the national, regional and global levels, benefiting from the economies of scale possible in a coherent global programme. At the heart of Earthwatch is a programme of comprehensive multidisciplinary assessments of a number of major global environmental problems, each under the responsibility of an appropriate lead agency.

6. UNEP is introducing activities to address early warning into the existing monitoring programmes in which it is involved. In cooperation with the Advisory Committee for the Coordination of Information Systems (ACCIS), UNEP has prepared a register of assessment-related environment activities in the United Nations system as the first step towards the establishment of a database or compendium that can be regularly updated. Cooperative relationships continue to be developed with government agencies, organizations and research institutes that contribute to a further strengthening of Earthwatch.

7. UNEP will continue work within the planning process for increased cooperation in Earthwatch and will expand its relationships with government agencies, organizations and research institutes. Discussions with United Nations bodies will be held on the interactions between Earthwatch and the development watch proposed in Agenda 21 in support of information for sustainable development.

8. The Executive Director will report to the Governing Council at its next regular session on the strengthening of Earthwatch, including financial and institutional arrangements.

Suggested action by the Governing Council

The Governing Council may wish:

To note the present report;

To express regret that circumstances have not permitted the preparation of the proposals requested in decision 16/37;

To request the Executive Director, in view of Agenda 21, to continue efforts to strengthen Earthwatch, and to report thereon to the Council at its next regular session.

II. ENVIRONMENTAL INDICATORS

9. At the third special session of the Governing Council in February 1992, an understanding was reached with the Executive Director that he would explore possible action by UNEP in the area of environmental indicators and report back to the Governing Council at its next session (see UNEP/GCSS.III/6, para. 120). UNEP therefore established an in-house task force on environmental indicators and commissioned two outside research groups to prepare a comprehensive review of the present status of work on environmental indicators and the possible roles that UNEP could usefully play in this field.

10. Since the term "indicator" is sometimes used quite loosely to include almost any sort of quantitative information, to avoid confusion a clear definition is needed. Indicators and indices are time series of numbers that measure, in a simple way, a state or trend for a specific purpose, e.g. to develop environmental policies or to monitor the performance of environmental management. An indicator is usually a single parameter, selected because it has wider significance, while an index is made up of some combination of parameters. Environmental indicators include both biophysical indicators, such as the concentration of carbon dioxide in the atmosphere, and socio-economic indicators, such as expenditure on sulphur dioxide abatement. Indicators can measure the state of the environment, pressures on it, impacts that result, and responses of society to environmental problems. Indicators are used by many groups, whose needs range from detailed and precise information, to aggregate measures. In most cases, comparability with standards is a prerequisite. Therefore, indicators and indices must be selected to meet users' needs.

11. Socio-economic environmental indicators are distinct from widely used economic indicators and indices such as GNP and the unemployment rate, and social indicators such as birth-rate, adult literacy and life expectancy. Indicators must be based on adequate and reliable data. One of the goals of Earthwatch is to develop the underlying global environmental data on which appropriate sets of environmental indicators can be based. Earthwatch could provide an inter-agency mechanism for cooperative work on environmental indicators.

A. *The need for further development of environmental indicators*

12. After a burst of activity in the 1970s and a lull in the 1980s, rapid progress is again being made in the field of environmental indicators in research institutes, Governments and international organizations, and this development has been reviewed in the consultants' comprehensive report. That report, has identified a need for action by UNEP and its partners in the United Nations system in the areas outlined in paragraphs 13 to 20 below.

The substantive need

13. Interest in sustainable development has stimulated a re-examination of the capacity to assess and monitor the state of the environment and detect changing conditions and trends. Environmental indicators are attracting considerable attention as a tool to chart and track the course of sustainable development and to help integrate environmental and economic decision-making, both nationally and internationally. Such indicators which link the environment, the economy and sustainability, could include, for example, the intensity of water use or timber resources, water quality, and nature protection. They would improve the assessment of environmental quality

itself, of achievement of national environmental goals and of implementation of international commitments. The indicators should provide analytically sound and measurable information that is relevant to policy. It now appears to be desirable to agree on what constitute the key environmental indicators, identify the required environmental data and statistics, and facilitate better data collection, management and reporting of these indicators by Governments and international organizations.

Identifying the needs of users

14. Most indicators have been developed in sectoral areas by people who collect data, rather than people who use it. International organizations, Governments, policy makers, scientists, modellers, NGOs, journalists and the public are all users of information who need to be consulted on their requirements for environmental indicators. Agenda 21 has identified many specific needs for environmental indicators, and has called for indicators to monitor progress in the implementation of the Agenda itself.

Addressing the concerns of all countries

15. Present work on environmental indicators is heavily biased towards the problems and interests of industrialized countries; such indicators may only be applicable to the urban and industrialized parts of developing countries. The United Nations system should work to achieve a better balance and also help to strengthen the capacity of developing countries to produce and use indicators for their own problems and needs.

Building a consensus

16. If environmental indicators are to be used, there must be a consensus on their value, requiring broad consultation among producers and users. Three levels of consensus are required: among scientists and statisticians collecting and compiling data; among policy developers and planning bodies, for whom environmental indicators should be important inputs; and among managers who need indicators to monitor the performance of environmental management and sustainable development.

Providing adequate environmental information

17. International coordination is needed to harmonize data collection methods, to ensure compatibility of data over time and from different geographic areas, to agree on standard definitions for indicators, and generally to ensure that changes in an indicator are due to changes in the environment and not to changes or unreliability in data collection methods. Indicators of long-term changes such as many predicted global changes will require a stable infrastructure for data collection over long time periods.

18. Even in developing countries, where data are scarce and precision poor, some environmental indicators may still be useful. They should be implemented rapidly, and later upgraded as future improvements permit.

Projecting indicators forward in time

19. Economic indicators are increasingly used to project future performance and evaluate policy options. Developing techniques for the forward projection of environmental indicators using quantitative models will be essential for policy development and early warning, both at the national level and globally, in the framework of Earthwatch.

Communicating environmental indicators

20. Environmental indicators will only be of value if they are communicated effectively to their target groups of users. On the basis of studies of effectiveness in communicating numerical information, guidelines should be prepared for the presentation of indicators to the various types of users.

B. *The role of UNEP and the United Nations system*

21. With the implementation of the recommendations of UNCED and the restructuring taking place in the United Nations system, it is premature to propose a precise role for UNEP in environmental indicators. Clearly UNEP, as the principal environmental body in the United Nations system, with technical expertise in both the biological and physical dimensions of the environment and in the socio-economic aspects of environmental problems, should make a significant contribution and there are already provisions in both Earthwatch and in the Environment and Economics Unit for action in this area. The United Nations Statistical Office, and the specialized agencies now developing indicators for their sectors, will also need to be involved. The role of the Commission on Sustainable Development and its secretariat, which will need to combine environmental and economic indicators in devising measures for sustainable development, has yet to be worked out.

22. The review of environmental indicators just completed by the outside research groups commissioned by UNEP will be widely circulated as a basis for further discussions. UNEP will also maintain a database on the significant actors in the field of environmental indicators. In keeping with its catalytic and coordinating role, UNEP will work for effective progress in this field within and outside the United Nations system. It will further develop and identify possible uses for environmentally adjusted indicators and indices in integrated socio-economic and environmental development planning (in collaboration with the United Nations Statistical Office and the Organisation for Economic Cooperation and Development (OECD). It will also profit from its extensive contacts with different groups of users to seek ways to promote a dialogue between producers and users of information, to develop a clearer definition of precisely what users need from environmental indicators, and to feed this information back to those who provide environmental data.

Suggested action by the Governing Council

The Governing Council may wish to note the present report and request UNEP to continue its work in this field in cooperation with the United Nations Statistical Office and the relevant specialized agencies, bearing in mind the role of the Commission on Sustainable Development.